

CLAIMS

I claim:

- 5 1. Container packing system for use with conveyed articles, the system comprising:
 - a carton having four sidewalls with first, second, third and fourth carton upper edges and first, second, third and fourth carton lower edges;
 - first, second, third and fourth upper flaps connected to the respective
 - 10 first, second, third and fourth upper edges;
 - first, second, third and fourth lower flaps connected to the respective first, second, third and fourth lower edges, the four sidewalls defining a carton inner space sized to receive therein a layer of the conveyed articles; and
 - 15 - a movable support platform for receiving thereon the conveyed articles and being shaped and dimensioned for location in the carton space between the four sidewalls, the support platform being actuatable to move between the upper edges and the lower edges, the first and second lower flaps being folded inwardly and upwardly towards a lower
 - 20 surface of the movable support platform.
2. The system, according to claim 1, in which the third and fourth lower flaps depend downwardly from the third and fourth carton lower edges, the third and fourth lower flaps being located below the lower surface of the support
- 25 platform.
3. The system, according to claim 2, in which the third and fourth lower flaps fold inwardly and towards each other to close a carton lower end.
- 30 4. The system, according to claim 3, in which the first and second lower flaps are sized and dimensioned smaller than the third and fourth lower flaps.
5. The system, according to claim 1, in which the first upper flap is folded outwardly and towards a conveyor belt having thereon the conveyed articles,

the first upper flap being sandwiched between a pair of sandwich plates located at a conveyor belt end and connected to a sandwich plate support, the sandwich plates including an upper fixed plate and a lower hinged plate.

5 6. The system, according to claim 5, in which the conveyor belt, the first upper flap and the movable support platform are located in a common generally horizontal plane relative to each other, the articles moving from the conveyor belt over the upper fixed plate and onto the movable support platform.

10 7. The system, according to claim 6, in which the lower hinged plate is actuatable between an open configuration for receiving the first upper flap and a closed flap holding configuration.

15 8. The system, according to claim 7, in which the movable support platform includes a support shaft having a vertical support shaft axis generally centrally positioned relative to the four sidewalls.

20 9. The system, according to claim 8, in which the movable support platform includes two side panels depending downwardly therefrom.

10. The system, according to claim 9, in which the first and second lower flaps rest against the two side panels.

25 11. The system, according to claim 10, in which a bottom sheet supporting a plurality of partition walls thereon is located on the movable platform, each partition wall defining an article receiver portion.

30 12. The system, according to claim 11, in which the articles are packed into adjacent article receiver portions in different orientations, the articles being packed into alternating orientations to attain a layer of articles.

13. The system, according to claim 12, in which the carton is a square box.

14. The system, according to claim 13, in which the carton is a rectangular box.
15. A method of packing a carton with articles from a conveyor belt,
5 comprising:
- moving downwardly first and second lower carton flaps folded inwardly and upwardly towards a lower surface of a movable support platform, the movable support platform being sized and dimensioned to be located between four carton sidewalls and to receive thereon the articles, so as
10 to pack the carton with a layer of the articles.
16. The method, according to claim 15, further comprising:
- folding the first and second lower carton flaps inwardly and upwardly towards the lower surface of the support platform, the support platform
15 being moveable away from an upper carton end.
17. The method, according to claim 16, further including:
- folding third and fourth lower carton flaps inwardly and towards each other.
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18. The method, according to claim 17, in which the carton includes:
- first, second, third and fourth carton upper edges and first, second, third and fourth carton lower edges;
 - first, second, third and fourth upper flaps connected to the respective
25 first, second, third and fourth upper edges; and
 - the first, second, third and fourth lower flaps being connected to the respective first, second, third and fourth lower edges.
19. The method, according to claim 18, in which the third and fourth lower
30 flaps depend downwardly from the third and fourth carton lower edges, the third and fourth lower flaps being located below the lower surface of the support platform.

20. The method, according to claim 19, in which the third and fourth lower flaps fold inwardly and towards each other to close a carton lower end.
21. The method, according to claim 20, in which the first and second lower
5 flaps are sized and dimensioned smaller than the third and fourth lower flaps.
22. The method, according to claim 21, in which the first upper flap is folded outwardly and towards a conveyor belt having thereon the conveyed articles, the first upper flap being sandwiched between a pair of sandwich plates located
10 at a conveyor belt end and connected to a sandwich plate support, the sandwich plates including an upper fixed plate and a lower hinged plate.
23. The method, according to claim 22, in which the conveyor belt, the first upper flap and the movable support platform are located in a common generally
15 horizontal plane relative to each other, the articles moving from the conveyor belt over the upper fixed plate and onto the movable support platform.
24. The method, according to claim 23, in which the lower hinged plate is actuatable between an open configuration for receiving the first upper flap and a
20 closed flap holding configuration.
25. The method, according to claim 24, in which the movable support platform includes a support shaft having a vertical support shaft axis generally centrally positioned relative to the four sidewalls.
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26. The method, according to claim 25, in which the movable support platform includes two side panels depending downwardly therefrom.
27. The method, according to claim 26, in which the first and second lower
30 flaps rest against the two side panels.
28. The method, according to claim 27, in which a bottom sheet support a plurality of partition walls thereon is located on the movable platform, each partition wall defining an article receiver portion.

29. The method, according to claim 28, in which the articles are packed into adjacent article receiver portions in different orientations, the articles being packed into alternating orientations to attain a layer of articles.

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30. The method, according to claim 29, in which the carton is a square box.

31. The method, according to claim 30, in which the carton is a rectangular box.